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INTERNATIONAL STUDY ON CANCER RISK IN THE PULP AND PAPER INDUSTRY: CANADIAN WORKSHOP



A PROJECT FUNDED BY THE
OCCUPATIONAL HEALTH AND SAFETY
HERITAGE GRANT PROGRAM



INTERNATIONAL STUDY ON CANCER RISK IN THE PULP AND PAPER INDUSTRY: CANADIAN WORKSHOP



### FINAL REPORT

International Cohort Study on Cancer Risk Among Workers
in the Pulp and Paper Industry: Canadian Workshop and Meeting,
November 16-19, 1991

### **EXECUTIVE SUMMARY**

The pulp and paper industry has employed and continues to employ hundreds of thousands of workers worldwide. Yet it remains an understudied occupational group, epidemiologically. A few small, conflicting studies are suggestive of cancer risks among pulp and paper industry workers. The need therefore exists to clarify these risks or to identify other risks (if they exist) through the conduct of a substantial enough study. To this end, the International Agency for Research on Cancer (IARC) initiated, in 1990, an historic-prospective cohort study of cancer risks in the pulp and paper industry. Canada's participation is being encouraged. The formula used by Canada's Coordinating Group. adopted to ensure Canada's fullest participation in a study of excellence, is one of involving not only scientists in a collaborative effort, but also involving, as full partners, representatives of the industry group, labour unions, and government from the outset. From across Canada, the United States, Finland and France, 29 people from all constituencies convened for a 2-1/2 day-long workshop and meeting in Edmonton, November 16-19, 1991. Co-sponsored by Federal, Province of Alberta and Industry monies, the workshop served to help participants understand the extent of knowledge about health effects associated with work in the pulp and paper industry. The meeting served to establish mechanisms for Canadian-wide participation with a view to developing a proposal based on costsharing while taking regional study design needs into account. An agreement of understanding among all participants was drafted.

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### **OBJECTIVES**

- The workshop was to establish the existing knowledge base concerning industry health risks;
   and
- The meeting was to decide on regional study design questions, funding options, and collaborative protocol.

### MATERIALS DEVELOPED

Appendix A provides a report on the event. It has been published in the Alberta Public Health Association Newsletter (January, 1992 issue).

Appendix B provides the Agreement of Understanding developed among Steering Committee Members.

Appendix C provides a list of the 29 participants.

### **RESULTS ACHIEVED**

Partnerships among all recognized stakeholder groups were secured, the knowledge-base was understood, and a formula for cost-sharing Canada's contribution to the IARC study was developed. A time frame through June 1, 1992 was agreed upon for the development of a national grant application.

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### DIVIDE SELECTION

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### RECOMMENDATIONS

A national proposal is to be developed to secure funding for full Canadian participation from all the nine provinces with eligible pulp and paper industrial activity. The proposal will endeavour to secure cost-sharing from Federal, provincial, industrial, and labour groups.

### **EVALUATION**

A formal evaluation was conducted at the concluding session. The results were generally "very good" and are given in Appendix D.

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For the APHA Newsletter, December 6, 1991 deadline

Towards Canada's Participation in an International Cancer Study Among

**Pulp and Paper Industry Workers** 

A rather unique conference, bringing together representatives of science, management, labour and government, has just taken place in Edmonton, November 16-19, 1991. It was convened by a National Coordinating Group, based in Edmonton. Over the past year, this Group has been working towards Canada-wide participation in an international research project to assess if cancer risks are associated with work in the pulp and paper industry.

The need to reexamine the cancer risks that have been suggested in this industry from the published literature, is because the studies that have been responsible for establishing the current knowledge base have relied on relatively small samples and the results often conflict with one another. Yet, many hundreds of thousands of workers have been employed and continue to be employed in this industry around the world. Therefore, the International Agency for Research on Cancer (IARC) in Lyon, France, is coordinating the work of scientists in some 21 countries in an attempt to establish as large a data base as possible. In so doing, sizable enough groups of workers having similar job experiences (and, therefore, by inference, similar workplace exposures) will be able to be combined from the many pulp and paper mills around the world for testing hypotheses in a statistically meaningful way. The study is being designed not only to determine if excess cancer risk indeed is associated with specific jobs and/or exposures, but also to evaluate the validity of the existing body of suggestive evidence. The timely identification of any problem areas would help the industry prevent workplace exposures, therefore reducing and/or



eliminating any health risks that workers may face in the course of their jobs.

The Edmonton conference successfully brought together scientists from all regions of Canada. As important, delegates from the Canadian Pulp and Paper Association (CPPA) representing the vast majority of mills in Canada, three labour unions representing in excess of 90 percent of labour in the pulp and paper sector (through the Canadian Paperworkers Union; the Pulp, Paper and Woodworkers of Canada; and the Fédération des travailleurs du papier et de la forêt), Health and Welfare Canada, and Alberta Health all participated. Guest speaker-participants from Finland, the United States and France brought their expertise and experience to the table.

The event was cosponsored by

- The Canadian Pulp and Paper Association
- Health and Welfare Canada
- Alberta Health
- Alberta Forestry, Lands and Wildlife
- Alberta Occupational Health and Safety Heritage Grant Program

CPPA further contributed by paying its own way to participate in the event as did Labour and the IARC representative.

The first day of the two-and-one-half-day event was devoted to an exchange of scientific knowledge. Dr. Paavo Jappinen from the Vuoksenlaakso Occupational Health Centre in Finland, Dr. Paul K. Henneberger from the State University of New York, New York, Dr. Genevieve Matanoski from The Johns Hopkins University, Baltimore, Maryland, and Ms. Kay Teschke from the University of British Columbia,



Vancouver, B.C., described the state of knowledge, discussed issues in exposure assessment, as well as logistical considerations for conducting a large multicentred cohort study.

The second day was devoted to issues concerning the conduct and design of a Canada-wide study. It was agreed that a two-phase study, consistent with the IARC proposal, could be undertaken in Canada. In addition, it was agreed that Canada should make every effort to provide exposure data to the job-title level in order to maximize the study's ability to advance knowledge. The scope of Phase I of the study is to enumerate all workers actively employed since 1950 in mills operating prior to 1976, and which volunteer to participate. All causes of mortality will be ascertained through linkage with the National mortality data base. Cancer incidence will be determined by linkage to provincial cancer registries. Standardized cancer incidence and mortality rates will be computed for various occupational sub-groups. Phase II of the study will be undertaken to more closely examine risks suggested through the Phase I component. A nested case-control design will enable more refined exposure assessments to be made and also will permit better control of potential confounding (e.g., lifestyle-related risk factors such as "smoking"). Once proposals are fully developed, they will be subjected to the usual scientific peer review process. Applications for support of the study already have been successful in British Columbia and Manitoba; Alberta and Ontario have recently submitted their applications. Applications for further cost-shared support to help secure Canada-wide participation soon will be made not only to local agencies, but also by submissions to the federal and provincial levels of government, as well as to both industry and labour.



The overall intent of the Edmonton Conference was to strengthen partnerships and collaboration among all stakeholder groups for the ultimate success of the study. Good science was recognized as being a function not only of collaborating scientists, but also of labour and industry involvement. It seems that the event succeeded in obtaining assurances, at least in principle, for the fullest possible participation from among all the invited interest groups. An evaluation conducted on the final morning of the meeting revealed high praise for the success of the event. The Coordinating Group in Edmonton, comprising Dr. C. Soskolne, national coordinator, with Dr. S. Hrudey, Dr. J. Berkel, Dr. T. Guidotti and Ms. S. Fincham serving as the national coordinating group of scientists, now has the task of advancing proposal development to the next stage. The cosponsors of the event deserve much praise for their foresight in supporting a project that could be a major contributor to the IARC initiative, thereby protecting the health of workers in this industry and providing further insights into cancer causation.

Report prepared by Colin L. Soskolne, Ph.D., National Coordinator: JARC Pulp and Paper Study, November 22, 1991.



### DRAFT 3: NOVEMBER 25, 1991

AGREEMENT OF UNDERSTANDING AMONG STEERING COMMITTEE MEMBERS FOR
THE CANADIAN COMPONENT OF THE IARC INTERNATIONAL COHORT STUDY ON
CANCER RISK AMONG WORKERS IN THE PULP AND PAPER INDUSTRY

### **OBJECTIVES**

A Canada-wide study on cancer risk among workers in the Canadian pulp and paper industry is being proposed as a component to the world-wide study initiated by the International Agency for Research on Cancer (IARC). The study is designed in two phases: (1) Examine mortality and morbidity at least at the plant/mill level, but ideally at the job-title level, from which to generate exposure-specific hypotheses which will lead, in turn, to (2) nested case-control studies designed to test exposure-specific hypotheses while controlling for potential confounding. A project of this scope requires for its successful conduct the creation of a Steering Committee composed of all stakeholder groups. This agreement of understanding among Steering Committee members is intended to establish the ground rules according to which all Steering Committee members agree to participate, with a view to minimizing the risk of potential misunderstanding and possible conflict.

### THE STEERING COMMITTEE

The Canadian Steering Committee (see Attachment A) comprises the National Coordinator, the Coordinating Group of Scientists, the Scientist-Coordinators (one from each province/region of Canada), the one representative from IARC on exposure assessment who also serves the Canadian study, four from labour, four from industry, and one from the federal government (and (?) provinces).

### TERMS OF REFERENCE

The role of the Steering Committee is to ensure that the most extensive possible study of excellence from across Canada is conducted. Concerns of the Steering Committee include, but are not limited to, ensuring that the National Coordinator and the Coordinating Group of Scientists reflect



Canada-wide interests in their running of the project at the national level.

### **VOTING**

Decisions will preferably be by consensus. However, majority will prevail. No individual or represented constituency will have veto power. Different rules of voting will be practiced: the distinction is made between voting on matters of science versus policy. For scientific decisions, only the scientific members of the Steering Committee will vote (including the National Coordinator, the Coordinating Group of Scientists, the Provincial/Regional Scientist-Coordinators, and the IARC/National Exposure Assessment person). For matters of policy, each of four blocks will caucus (i.e., scientists, labour, industry and government) with one vote each; the National Coordinator, as Chair, is empowered to exercise a vote in the event of a tie.

### RESPONSIBLE SCIENTIFIC REPORTING

Results from either phase of the study for which there have been reasonable control of confounding, assessment of interaction and/or where the risk of type I and type II errors have been minimized within the bounds of standard practice, are to be considered for publication. The potential incrimination of any aspect of the industry shall be avoided unless the scientific evidence can be substantiated.

### DATA SHARING AND ANONYMITY

Each province/region will provide to the National Coordinator a verified computer tape or diskette in readable format, with supporting documentation, containing the minimum data set necessary for national analyses. All identifiers - relating to individual cohort members and to plants/mills - will be coded to ensure their anonymity at the provincial/national/international levels. It is from a combination of the respective provincial/regional data sets that the National Coordinator will provide IARC with the Canadian contribution to the international study (for each of phases I and II).

### **AUTHORSHIP**

Each province/region is free to publish its results at its discretion. Authorship for "provincial"



papers will be decided by the provincial principal investigator of the study. It is considered "good practice" to include in the list of authors all those who have contributed significantly to the design, conduct and/or analysis of the study be it on a provincial level or from a national/international perspective. If only minimal input had been provided to the conduct of the work resulting in a report or paper, then such scientists will decline authorship.

Publications regarding the pooled data from all provinces will be authored by all scientific members of the Steering Committee. Order of authorship will be decided on the basis of the extent of the contribution to the topic of the paper under consideration (e.g., an exposure-assessment paper could have K. Teschke as first author). An analogous approach will be taken where only some provinces pool their data. Usually, the principal author of a proposed internal report or of a scientific paper intended for publication, will advise all Steering Committee members of such intent by presenting them in advance with a proposed title, authorship list (in order of contribution to be made), brief outline of content and intended disposition (e.g., internal report to which agency and/or intended journal for publication).

All draft and final manuscripts, both as a courtesy and to ensure that findings have maximum practical utility/application, will be submitted CONFIDENTIALLY to all members of the Steering Committee for their respective feedback. The members of the Steering Committee will treat these manuscripts, be they internal reports or scientific papers, with absolute confidentiality.

Formal responses/suggestions must be provided within 90 days of the postmarked day. All feedback will be considered by the authors, with a formal response to those who provided the feedback within 45 days.

Sponsors, industry, labour, government and/or any others facilitating the study (e.g., IARC) will be duly acknowledged.

Abstracts submitted for presentation to a scientific meeting will be submitted to the members of the Steering Committee for information only. Authorship will follow the guideline above for manuscripts.



### MEDIA INTERVIEWS

Steering Committee members will confine their media responses to the domain of their responsibility within the study; appropriate referrals will be made where necessary. No results or their interpretation will be discussed with the media relating to analyses either in preparation or completed, or under review (either by the Steering Committee or by a scientific or other publication) until within one week of the known publication date of such findings.

Where the media are present at scientific conferences, the <u>preliminary</u> nature of the findings will be emphasized.

### CONFLICT RESOLUTION

Conflicts relating to scientific matters will be resolved by a simple majority vote among the scientific members of the Steering Committee. Conflicts relating to policy matters will be by simple majority among the four caucuses.

### AMENDMENTS TO THIS AGREEMENT

Amendments may be made only by simple majority of the full Steering Committee.

Note: Nothing contained herein shall be read to contradict the IARC "Protocol of Study" dated September 23, 1991, in particular, pages 18-25 (see Attachment B).



### **DRAFT #3: NOVEMBER 25, 1991**

### ATTACHMENT A

### **CANADIAN STEERING COMMITTEE - VOTING MEMBERS**

### NATIONAL COORDINATOR

Colin Soskolne

### COORDINATING GROUP OF SCIENTISTS

Colin Soskolne

Steve Hrudey

Hans Berkel (votes as AB coordinator when Steering Committee meets)

Tee Guidotti

Shirley Fincham

### PROVINCIAL/REGIONAL SCIENTIST-COORDINATORS (or their designates)

Pierre Band, BC

Hans Berkel, AB

Helen McDuffie, SK

Allen Kraut, MN

Murray Finkelstein, ON

Gilles Thériault, QC

Judith Guernsey, NS & NB

Sharon Buehler, NF

### IARC/NATIONAL EXPOSURE ASSESSMENT

Kay Teschke

### LABOUR (or their designates)

Greg Melnechuk, PPWC-BC

Keith Newman, CPU-Quebec

Norman MacLellan, CPU-BC

Claude Plamondon, Fed. trav. papier foret

### INDUSTRY - CPPA (or their designates)

Agneta Hollander

Bernard Gascon

MacDonald Caza

Stephen Prahacs

### FEDERAL GOVERNMENT (or their designates)

Yang Mao

### PROVINCIAL GOVERNMENTS (or their designates)

Brian Alleyne, AB

Others to be nominated

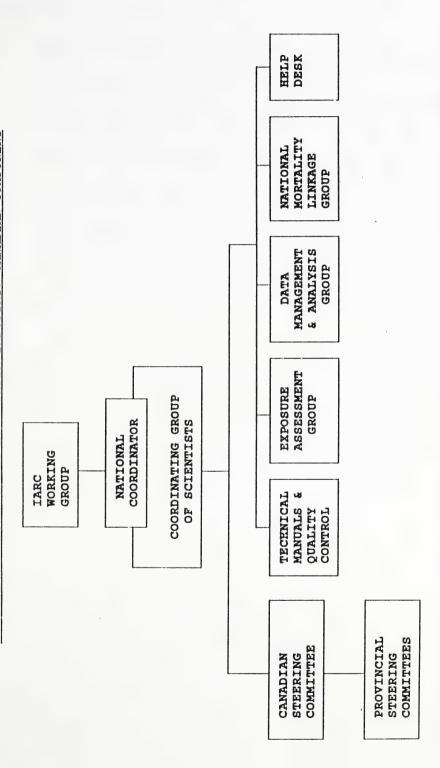
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### ORGANIZATIONAL CHART: LINES OF COMMUNICATION

## IARC INTERNATIONAL COHORT STUDY ON CANCER RISK

# AMONG WORKERS IN THE PULP AND PAPER INDUSTRY: CANADIAN COMPONENT



It does not specify formal authority nor This Chart outlines formal communication channels. it detail formal responsibility. does



### COMMITTEE/GROUP MEMBERSHIP:

- 1. The National Coordinator and the Coordinating Group of Scientists are part of the Canadian Steering Committee and are named in Appendix A.
- 2. The Provincial Steering Committees minimally comprise the local investigators.
- 3. Technical Manuals & Quality Control Committee: Allen Kraut, Tee Guidotti, Murray Finkelstein, and Bonnie James.
- 4. Exposure Assessment Group: Kay Teschke, Steve Hrudey, Judith Guernsey, Agneta Hollander, and Andre Bilodeau.
- 5. Data Management & Analysis Group: Murray Finkelstein, Dalsu Baris, Kay Teschke and Colin Soskolne.
- 6. National Mortality Linkage Group: Refer to Coordinating Group of Scientists.
- 7. Help Desk: Refer to Coordinating Group of Scientists.



### LIST OF PARTICIPANTS

### November 16-19, 1991

Mr. Brian Alleyne, Edmonton, Alberta

Dr. Dalsu Baris, Montreal, Quebec

Dr. Hans Berkel, Edmonton, Alberta

Mr. Andre Bilodeau, Quebec City, Quebec

Dr. Paolo Boffetta, Lyon, France

Ms. Joan Carr, Grande Prairie, Alberta

Dr. MacDonald Caza, Montreal, Quebec

Ms. Shirley Fincham, Edmonton, Alberta

Dr. Murray Finkelstein, Toronto, Ontario

Dr. Bernard Gascon, Montreal, Quebec

Dr. Judith Guernsey, Halifax, Nova Scotia

Dr. Tee Guidotti, Edmonton, Alberta

Dr. Paul Henneberger, Syracuse, New York

Ms. Agnet Hollander, Montreal, Quebec

Dr. Steve Hrudey, Edmonton, Alberta

Ms. Bonnie James, St. Johns, Newfoundland

Dr. Paavo Jappinen, Imatra, Finland

Dr. Allan Kraut, Winnipeg, Manitoba

Dr. Yang Mao, Ottawa, Ontario

Dr. Genevieve Matanoski, Baltimore, Maryland

Mr. Greg Melnechuk, Kamloops, British Columbia

Mr. Keith Newman, Montreal, Quebec

Mr. Guy Normandin, Quebec City, Quebec

Mr. Steven Prahacs, Montreal, Quebec

Dr. Robin Roberts, Montreal, Quebec

Dr. A. Senthilselvan, Saskatoon, Saskatchewan

Dr. Colin Soskolne, Edmonton, Alberta

Ms. Kay Teschke, Vancouver, British Columbia

Dr. Leslie Yee, Cincinnati, Ohio



### CANADIAN PULP AND PAPER WORKSHOP-MEETING, EDMONTON, ALBERTA

### NOVEMBER 16-19, 1991

### **EVALUATION SUMMARY**

### Ten questions were asked:

- 1. Did the Workshop fulfill its goal of exchanging information?
- 2. Did the Meeting serve its goal of deciding future direction?
- 3. Did the Meeting serve its goal of building partnerships?
- 4. Did the Meeting serve its goal of deciding funding strategies?

### Please rate the guest speakers:

- Gene Matanoski
- 6. Paavo Jappinen
- 7. Paul Henneberger
- 8. Paolo Boffetta9. Kay Teschke
- 10. Please rate the organization of the whole event.
  Please provide comments if you wish.

The evaluation was conducted on the final morning by which time:

- (a) 2 industry representatives had left (Gascon and Caza).
- (b) 2 guest speaker participants had left (Boffetta and Matanoski).
- (c) 2 provincial scientific coordinators had left (Guernsey and Senthilselvan).
- (d) I labour representative had left (Newman).

i.e., 7 had left prior to 8:30 a.m. on the final morning.

Question No.	n	Very Poor	Poor	Satisfactory	Good	Very Good	Missing
1	19	0	0	0	9	10	0
2	19	0	0	3	11	5	0
3	19	0	0	0	5	14	0
4	19	0	0	4	9	6	0
5	19	0	0	0	2	17	0
6	19	0	0	1	4	13	1
7	19	0	0	0	8	10	1
8	19	0	0	5	7	7	0
9	19	0	0	0	5	14	. 0
10	19	0	1	3	5	9	1

### Comments:

- (1) Very interesting workshop.
- (2) Opportunities for social interaction were excellent! Process - very good - efforts to reduce conflict and resolve effectiveness were largely successful.
- (3) A "no-frills" conference.
- (4) Fulfilled all objectives with excellence and future prospects for a national study of excellence are most encouraging from the partnerships that have been developed.

